

IAP13 Rec'd PCT/PTO 09 DEC 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Helmut Konopa
Application Number: Unassigned
Filing Date: Concurrently Herewith
Group Art Unit:
Examiner:
Title: REFRIGERATION DEVICE COMPRISING
CONTROLLED DE-HUMIDIFICATION

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. 1.98, I am submitting a completed "INFORMATION DISCLOSURE STATEMENT BY APPLICANT" (*Form PTO/SB/08A*) with patents and/or publications as delineated therein attached.

DE 39 04216 discloses that, to control the cool-space temperature of a refrigerator which is designed with a normal refrigerator section (1) and a freezer section (2), a one-circuit refrigerant circulation, a compressor refrigeration unit (3), a condenser (6), a throttle member and in each case an evaporator part (4, 5) for the freezer section and the normal refrigerator section. An electronic control unit (8) ensures the regulation of the temperature of the interior space, a temperature sensor (9) being arranged in the normal refrigerator section (1) and a further temperature sensor (11) in the freezer section (2). The microprocessor-controlled control unit (8) is supplied with the temperature values from the interior space of the normal refrigerator section (1), directly from the evaporator part (4) of the normal refrigerator section (1), and from the interior space of the freezer section (2). When the temperature in the freezer section (2) exceeds a predetermined value, a recirculation air blower (12) is switched on for circulating the air in the normal refrigerator section (1). As a result, the temperature in the freezer section (2) is always held at permissible temperature values even in the case of extremely unfavourable outside temperatures or when the user has preset the desired value at a value which is too high.

JP 2 17375 discloses that to reduce a load applied on a compressor and restrain the electric power consumption of the compressor by a method wherein the operating frequency

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of a fan is increased stepwisely upon driving the compressor when an energy saving mode button is actuated. An operation panel 4 is provided with an energy saving mode button, transmitting a signal to a control device 5 upon driving a compressor 7 so that the operating frequency of a fan motor device 8 supplying cold air produced in an evaporator into respective food storage chambers is increased stepwisely. When the energy saving mode button 4e is actuated, the fan motor device 8 is controlled by a timer 5a accommodated in the control device 5 so as to increase the operating frequency thereof stepwisely even when the compressor 7 is actuated. According to this method, the operating frequency of the fan is changed in accordance with the amount of refrigerant sent into the evaporator whereby a load applied on the compressor may be reduced and the electric power consumption of the compressor may be restrained.

JP 1 222177 discloses a process to reduce noise in an arbitrary time band where it is not used frequently, by operating a timer function on the handling of a 'silence' pushbutton switch, and lowering the operation frequency of a fan motor device, which drives a fan, for a specified period of time. During a normal operation status of an electric refrigerator, a judgment is made as to whether or not a silence pushbutton switch 4e is depressed. When the silence button switch 4e remain OFF, an ordinary operation is executed while a timer function 5a is set when the pushbutton switch 4e is in ON status. Then, the operation frequency of a fan motor device 7 is lowered by the inverter system identical to the control of a compressor 6. Then, a judgment is made as to whether the silence button switch is ON status or not. The release of the silence by OFF status is executed by depressing the pushbutton switch 4e again. When the silence is released, normal operation starts. When the silence is not released, a judgment is made as to whether a specified period of time passes or not based on the timer function 5a. The operation frequency of the fan motor device 7 remains low until the timer function 5a is timed up. It is, therefore, possible to reduce the noise produced by a fan 7a compared with the normal operation.

DE 101 39 834 discloses that the invention relates to a refrigeration device comprising two temperature zones (1, 2) that are cooled by condensers (5, 4), arranged in a common coolant circuit, a first (1) of said zones being equipped with a fan (9). In said device, to maintain the temperatures of the temperature zones (1, 2) within their respective target ranges, the refrigeration circuit is operated intermittently, depending on a temperature that is measured in one of the temperature zones. The fan (9) is also operated intermittently, whereby the operational and non-operational phases of the coolant circuit and the fan are determined in such a way that operational phases of the coolant circuit at least partially coincide with non-operational phases of the fan (9).

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PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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| Sheet | 1 | of | 2 |
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Complete if Known

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|------------------------|----------------|
| Application Number | Unassigned |
| Filing Date | Herewith |
| First Named Inventor | Helmut Konopa |
| Art Unit | |
| Examiner Name | |
| Attorney Docket Number | 2003P00855WOUS |

U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|--|------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ Number ⁴ Kind Code ⁵ (# known) | MM-DD-YYYY | | | |
| | | EP 0 982 552 | 03-01-2000 | Han Joo Yoo et al | | ✓ |
| | | DE 39 04216 | 08-16-1990 | Dr. Peter Zinkann | | |
| | | JP 02 17375 | 01-22-1990 | Hoshino Akihito et al | | |
| | | JP 1 222177 | 09-05-1989 | Hoshino Akihito et al | | |
| | | DE 101 39 834 | 02-27-2003 | Roland Maier et al | | |
| | | EP 0 859 206 | 08-19-1998 | Daniel Witten-Hannah e | | ✓ |

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Signature

Date
Considered

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|------------------------|------------------|
| Application Number | Unassigned |
| Filing Date | Hebrew 11/560156 |
| First Named Inventor | Helmur Konopa |
| Art Unit | |
| Examiner Name | |
| Attorney Docket Number | 2003P00855WOUS |

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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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|--------------------------|-----------------------|---|--------------------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ -Number ⁴ -Kind Code ⁵ (if known) | | | | |
| | | EP 0 949 468 | 10-13-1999 | Thomas Guffler et al | | |
| | | International Search Report PCT/EP2004/006256 | | | | ✓ |
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**Examiner
Signature**

/Charles Bell/

Date
Considered

12/19/2008

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